

Notice of Allowability

Application No.

10/678,699

Examiner

Dang T. Nguyen

Applicant(s)

LIN ET AL.

Art Unit

2824

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11 October 2005.
2. ☒ The allowed claim(s) is/are 11-18 and 20-32.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other Search history.


ANH PHUNG
PRIMARY EXAMINER

Response to Amendment after final

1. This office action is in response to applicant's amendment after final received on 10/11/2005. Claims 18, and 26 have been amended. Claims 1-10 and 19 have been canceled. Claims 11 – 18 and 20 - 32 are pending on this application. Claims 1, 18 and 27 are independent claims.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Dave Hofman on December 5, 2005.

The application has been amended as follows:

Claim 11, line 5 adds - -and- -

Claim 11, line 7 changes "from" To - -in magnitude relative to- -

Claim 17, line 13 changes "from" To - -in magnitude relative to- -

Claim 27, line 6 changes "different." To - -different, at least with respect to magnitude.- -

Allowable Subject Matter

3. Claims 11 – 18 and 20 - 32 are allowed.

The following is an examiner's statement of reasons for allowance:

With respect to claims 11 and 18, in addition to other elements in the respective claims, the prior art of record fails to teach or suggest “wherein a first magneto-resistance of the first MTJ device is different in magnitude relative to a second magneto-resistance of the second MTJ device”.

With respect to claim 27, in addition to other elements in the respective claims, the prior art of record fails to teach or suggest “the first magneto-resistance ratio and the second magneto-resistance ratio are substantially different, at least with respect to magnitude”.

With respect to claims 12-17, 20-26, and 28-32, depend on allowable independent claims above then are allowed.

4. The prior art made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations. Gill and Slaughter et al., taken individually or in combination, do not teach the claimed invention of the first and second magneto-resistance of the first and second MTJ are different in magnitude, in combination with other limitations.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Prior art

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2824

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|------------------|----------------------------|-------------------------------|
| Gill | Patent No. US 6,185,079 | Date of Patent: Feb. 6, 2001 |
| Slaughter et al. | Patent No. US 6,205,052 B1 | Date of Patent: Mar. 20, 2001 |

Contact Information

7. Any inquiry concerning this communication from the examiner should be directed to Dang Nguyen, who can be reached by telephone at (571) 272-1955. Normal contact times are M-F, 8:00 AM - 4:30 PM.

Upon an unsuccessful attempt to contact the examiner, the examiner's supervisor, Richard Elms, may be reached at (571) 272-1869.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist, whose telephone number is (703) 305-3900. The faxed phone number for organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the Status of an application may be obtained from the patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or EBC@uspto.gov.



**ANH PHUNG
PRIMARY EXAMINER**

Dang Nguyen 12/5/2005